

**Louisiana Department of Environmental Quality (LDEQ)
Office of Environmental Services**

STATEMENT OF BASIS

**Hexion Specialty Chemicals Inc
Hexion Specialty Chemicals Inc - Formaldehyde Plant
Geismar Ascension Parish, Louisiana
Agency Interest Number: 92534
Activity Number: PER20090003
Proposed Permit Number: 2019-V4**

I. APPLICANT

Company:

Hexion Specialty Chemicals Inc - Formaldehyde Plant
9288 Hwy 75
Geismar, Louisiana 70734

Facility:

Formaldehyde I, II, III & Methanol Tank Farm - Hexion Specialty Chemicals, Inc
9288 Hwy 75
Geismar, Ascension Parish, Louisiana

Latitude	30 Deg	11 Min	59 Sec
Longitude	91 Deg	1 Min	11 Sec

II. FACILITY AND CURRENT PERMIT STATUS

Hexion Specialty Chemicals (Hexion) owns and operates five formaldehyde production units, a methanol tank farm, and loading/unloading operations for formaldehyde and methanol in Ascension Parish near the town of Geismar. Currently Formaldehyde Plants I, II, and III, the methanol tank farm, and barge loading operations operate under Permit No.2019-V3, issued February 13, 2007.

Hexion Specialty Chemicals, Inc - Formaldehyde Plant is a designated Part 70 source. Several Part 70 permits have been issued to the operating units within the Geismar. These include:

Permit No.	Unit or Source	Date Issued
2019-V3	Plants I, II, III & Methanol Tank Farm)	02/13/2007
2631-V3	Plants (IV & V)	05/19/2005

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III. PROPOSED PROJECT/PERMIT INFORMATION

Application

A permit application was submitted on March 13, 2009 requesting a Part 70 operating permit for the Formaldehyde I, II, III & Methanol Tank Farm.

Project

Hexion requested a renewal/modification of the Part 70 Operating Permit No. 2019-V4 as required by Louisiana Administrative Code (LAC) 33:III.507.E.

In this renewal/modification, Hexion requested the following changes:

- Include the T-Flare (Source ID No. 2009-01);
- Delete the General Flare (Source ID No. 21) and the Urea Plant Waste Incinerator (Source ID No. 80-6); and
- Reconcile emission sources based on emission calculation methodologies and components counts.
- Revise three Formaldehyde Product Tanks (EQT0015, EQT0018 and EQT0050) and Formaldehyde Rail/Truck Loading (EQT007) from Group 2 to Group 1 based on the determination resulted from data gathered during a recent investigation of the safety of operating processes at the facility.

Proposed Permit

Permit 2019-V4 will be the renewal/modification Part 70 operating permit 2019-V3 for the Formaldehyde I, II, III & Methanol Tank Farm.

Permitted Air Emissions

Estimated emissions in tons per year are as follows:

<u>Pollutant</u>	<u>Before</u>	<u>After</u>	<u>Change</u>
PM ₁₀	24.24	24.29	+0.05
SO ₂	0.12	0.11	-0.01
NO _x	19.90	21.32	+1.42
CO	137.84	139.20	+1.36

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VOC*	110.37	114.24	+3.87
H ₂ SO ₄	0.004	<0.01	-

***VOC LAC 33:III Chapter 51 Toxic Air Pollutants (TAPs):**

Pollutant	Before	After	Change
Formaldehyde	8.44	8.25	-0.19
Methanol	32.80	37.28	+4.48
Total VOC TAPs	41.24	45.53	+4.29
Other VOC	69.13	68.71	-0.42

IV REGULATORY ANALYSIS

The applicability of the appropriate regulations is straightforward and provided in the Specific Requirements section of the proposed permit. Similarly, the Monitoring, Reporting and Recordkeeping necessary to demonstrate compliance with the applicable terms, conditions and standards are also provided in the Specific Requirements section of the proposed permit.

Applicability and Exemptions of Selected Subject Items

ID No.	Requirement	Note
EQT049	LAC 33:III.Chapter 15 Emission Standards for Sulfur Dioxide	DOES NOT APPLY as per LAC 33.III.1502.A.3, SO ₂ < 5 TPY

Prevention of Significant Deterioration/Nonattainment Review

There are no net emission increases of PSD applicable compounds above the significance level. Therefore, this project is exempted from PSD review.

Streamlined Equipment Leak Monitoring Program

Fugitive emissions are subject to various regulations, such as LAC 33:III.2122, 5109, 40 CFR 60 Subpart VV and 40 CFR 63 Subpart H. Hexion consolidates these requirements by complying with a streamlined equipment leaks monitoring program as specified in the Louisiana Fugitive Emission Program Consolidation Guidelines.

MACT Requirements

The facility is subject to Louisiana MACT requirements. Detailed requirements are listed in the Specific requirements Section of the draft permit.

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Air Quality Analysis

Emissions associated with the proposed facility were reviewed by the Air Quality Assessment Division to ensure compliance with the NAAQS and AAS. LDEQ did not require the applicant to model emissions.

Dispersion Model(s) Used: ISC3

Pollutant	Time Period	Calculated Maximum Ground Level Concentration	Louisiana Toxic Air Pollutant Ambient Air Quality Standard or (National Ambient Air Quality Standard {NAAQS})
Formaldehyde	1997-2001	5.29 mg/m ³	7.69 mg/m ³

General Condition XVII Activities

The facility will comply with the applicable General Condition XVII Activities emissions as required by the operating permit rule. However, General Condition XVII Activities are not subject to testing, monitoring, reporting or recordkeeping requirements. For a list of approved General Condition XVII Activities, refer to the Section VIII – General Condition XVII Activities of the proposed permit.

Insignificant Activities

All Insignificant Activities are authorized under LAC 33:III.501.B.5. For a list of approved Insignificant Activities, refer to the Section IX – Insignificant Activities of the proposed permit.

V. PERMIT SHIELD

The permit shield was denied. EPN 85-01-Off Gas Vent (EQT 0017), EPN 89-02 - Off Gas Vent (EQT 0027) and EPN 2001-4 - Boiler (EQT0049) must comply with the requirements of 40 CFR 63.113(a)(2).

VI. PERIODIC MONITORING

All periodic monitoring is conducted in accordance with state and federal regulations. See Specific Requirement of the draft Part 70 permit renewal and modification for monitoring requirements.

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VII. GLOSSARY

Carbon Monoxide (CO) – A colorless, odorless gas, which is an oxide of carbon.

Maximum Achievable Control Technology (MACT) – The maximum degree of reduction in emissions of each air pollutant subject to LAC 33:III.Chapter 51 (including a prohibition on such emissions, where achievable) that the administrative authority, upon review of submitted MACT compliance plans and other relevant information and taking into consideration the cost of achieving such emission reduction, as well as any non-air-quality health and environmental impacts and energy requirements, determines is achievable through application of measures, processes, methods, systems, or techniques.

Hydrogen Sulfide (H₂S) – A colorless inflammable gas having the characteristic odor of rotten eggs, and found in many mineral springs. It is produced by the reaction of acids on metallic sulfides, and is an important chemical reagent.

New Source Review (NSR) – A preconstruction review and permitting program applicable to new or modified major stationary sources of air pollutants regulated under the Clean Air Act (CAA). NSR is required by Parts C (“Prevention of Significant Deterioration of Air Quality”) and D (“Nonattainment New Source Review”).

Nitrogen Oxides (NO_x) – Compounds whose molecules consist of nitrogen and oxygen.

Organic Compound – Any compound of carbon and another element. Examples: Methane (CH₄), Ethane (C₂H₆), Carbon Disulfide (CS₂)

Part 70 Operating Permit – Also referred to as a Title V permit, required for major sources as defined in 40 CFR 70 and LAC 33:III.507. Major sources include, but are not limited to, sources which have the potential to emit: ≥ 10 tons per year of any toxic air pollutant; ≥ 25 tons of total toxic air pollutants; and ≥ 100 tons per year of regulated pollutants (unless regulated solely under 112(r) of the Clean Air Act) (25 tons per year for sources in non-attainment parishes).

PM₁₀ – Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by the method in Title 40, Code of Federal Regulations, Part 50, Appendix J.

Potential to Emit (PTE) – The maximum capacity of a stationary source to emit any air pollutant under its physical and operational design.

Prevention of Significant Deterioration (PSD) – A New Source Review permitting program for major sources in geographic areas that meet the National Ambient Air

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Quality Standards (NAAQS) at 40 CFR Part 50. PSD requirements are designed to ensure that the air quality in attainment areas will not degrade.

Sulfur Dioxide (SO₂) – An oxide of sulfur.

Sulfuric Acid (H₂SO₄) – A highly corrosive, dense oily liquid. It is a regulated toxic air pollutant under LAC 33:III.Chapter 51.

Title V Permit – See Part 70 Operating Permit.

Volatile Organic Compound (VOC) – Any organic compound, which participates in atmospheric photochemical reactions; that is, any organic compound other than those, which the administrator of the U.S. Environmental Protection Agency designates as having negligible photochemical reactivity.